

| Type Grade | Rapid Setting | | Slow Setting | | | | Prime | |
|---|---------------|------|--------------|------|------|------|-------|------|
| | RS-2h | | SS-1h | | SS-1 | | EAP-1 | |
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| Residue by Distillation (Percent AC) | 63 | | 57 | | 57 | | 50 | |
| Tests on Residue from Distillation Test: Penetration 77 °F (25 °C) 100 gm/5 Sec. (dmm) | 80 | 140 | 40 | 110 | 100 | 200 | | |
| Ductility at 77 °F (25 °C) 5 cm/min. (cm) | 40 | | 40 | | 40 | | | |
| Solubility in Trichloroethylene (Percent) | 97.5 | | 97.5 | | 97.5 | | 97.5 | |
| Float at 140 °F (60 °C), (Sec.) | | | | | | | 20 | |

- (a) The test requirement for settlement may be waived when the emulsified asphalt is used in less than five (5) days; or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than five (5) days.
- (b) The 24-hour (1 day) storage stability test may be used but does not predict that the 5 day settlement test will pass.
- (c) The demulsibility test shall be made within 30 days from date of shipment.
- (d) The cement mixing test shall be applicable only if material is used in Asphalt Slurry Seal.

B. Fabrications

General Provisions 101 through 150.

C. Acceptance

Test as follows:

| Test | Method |
|-----------------------------|-------------|
| Testing emulsified asphalts | AASHTO T 59 |
| Float test | AASHTO T 50 |

D. Materials Warranty

General Provisions 101 through 150.

Section 823—Cutback Asphalt Emulsion

823.1 General Description

This section includes the requirements for cutback asphalt emulsions.

823.1.01 Related References

A. Standard Specifications

Section 820—Asphalt Cement

B. Referenced Documents

AASHTO:

T 44

T 49

T 51

T 55

T 72

T 111

GDT 11

823.2 Materials**823.2.01 Cutback Emulsion****A. Requirements**

Use the various grades of cutback asphalt emulsions that meet the requirements shown in Table 1.

Table 1—Properties of Cutback Asphalt Emulsions

| | Requirements | Grade | | | |
|--|--|--------|------|--------|------|
| | | CBAE-2 | | CBAE-3 | |
| | | Min. | Max. | Min. | Max. |
| | Viscosity, Furol at 140° F (60 °C), in seconds | 100 | 350 | 400 | 700 |
| | Distillation: | | | | |
| | Residue (asphalt cement) percent by weight | 67 | | 72 | |
| | Water content percent by weight | 4 | 12 | 4 | 12 |
| | Naphtha content (by difference) percent by weight | 12 | 25 | 10 | 20 |
| | Tests on residue from distillation: | | | | |
| | Penetration at 77 °F (25 °C), 100 g, 5 seconds | 60 | 150 | 60 | 150 |
| | Ductility at 77° F (25 °C), 5 cm per min., (cm) | 100 | | 100 | |
| | Solubility in trichloroethylene, percent by weight | 99 | | 99 | |
| | Ash, percent by weight | | 1.0 | | 1.0 |

B. Fabrication

1. Prepare the cutback asphalt emulsions by compounding a suitable volatile naphtha, emulsifying agent, and water with asphalt cement.
2. Mechanically invert 100 percent of the cutback emulsions before shipping.

C. Acceptance

Test as follows:

| Test | Method |
|--------------|-------------|
| Viscosity | AASHTO T 72 |
| Distillation | GDT 11 |
| Water | AASHTO T 55 |

| | |
|-------------|--------------|
| Penetration | AASHTO T 49 |
| Ductility | AASHTO T 51 |
| Solubility | AASHTO T 44 |
| Ash | AASHTO T 111 |

D. Materials Warranty

General Provisions 101 through 150.

Section 824—Cationic Asphalt Emulsion

824.1 General Description

This section includes the requirements for cationic asphalt emulsions.

824.1.01 Related References

A. Standard Specifications

General Provisions 101 through 150.

B. Referenced Documents

AASHTO T 59

GDT 44

824.2 Materials

824.2.01 Cationic Asphalt Emulsion

A. Requirements

1. Use a homogenous emulsion. After thorough mixing, the emulsion cannot show signs of separation within 30 days.
2. Use cationic emulsion grades that meet the requirements in Table 1 (metric).

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

| Test | Method |
|---|-----------------------|
| Testing emulsified asphalts (with the following exception): Frictional value | AASHTO T 59 GDT 44 |

D. Materials Warranty

General Provisions 101 through 150.

Table 1—Requirements for Cationic Emulsified Asphalt (Notes)

1. The Engineer may waive the settlement test requirement if the emulsified asphalt is used in less than 5 days. However, the Department may still require that the settlement test be run from the time the sample is received until it is used.
2. The 24-hour storage stability test may be used. However, this test does not predict whether the 5-day settlement test will pass.
3. Perform the demulsibility test within 30 days from date of shipment.